

[FLIP-CHIP PACKAGE SUBSTRATE AND FLIP CHIP DIE]

Abstract of Disclosure

A flip-chip package board having signal bump pads, power bump pads and ground bump pads grouped together into respective inner bump pad rows and sequentially laid down on one side of the group of core bump pads so that the power bump pad row and the ground bump pad row alternate between signal bump pad rows. In addition, the outer bump pads are positioned in such a way that the shortest possible separation between neighboring outer bump pads is used. This invention also provides a flip chip having an active surface with a plurality of die pads thereon that corresponds in position to the bump pads on the flip-chip package board.

